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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,154	03/30/2004	Lutz Raddatz	Raddatz I	5417

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EXAMINER

LE, THI Q

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 12/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/813,154

Applicant(s)

RADDATZ, LUTZ

Examiner

Thi Q. Le

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 30 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 3/30/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. The information disclosure statement (IDS) filed on 3/30/2004 was considered by the examiner.

Drawings

1. The drawings are objected to because in **Figure 2**, the word **“RESIDIUAL”** is **incorrectly spelled. Replace it with “RESIDUAL”**. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1-9** are rejected under 35 U.S.C. 102(b) as being anticipated by **Nishimoto et al.** (US PGPub 2002/0089724 A1).

Consider **claim 1**, Nishimoto et al. clearly show and disclose, a method for measuring residual chromatic dispersion in an optical transmission system, the method comprising the steps of: introducing a predetermined amount of chromatic dispersion at the receive end of the system (read as, the variable dispersion compensator 10 performing wavelength dispersion compensation; figure 1, paragraph 0052); measuring a bit error rate for the system corresponding to the predetermined amount of chromatic dispersion (read as, the bit error information mentoring circuit 12 measures the bit error rate of the received data; paragraph 0054); iterating the introducing and measuring steps until the bit error rate is a minimum over all measured bit error rates (read as, the controlling circuit 13 causes the variable dispersion compensator 10 to change the wavelength dispersion compensation value within a preset range to determine the optimize values for minimizing the bit error rate; paragraph 0065); wherein the residual chromatic dispersion in the optical transmission system is represented by a complement of the predetermined amount of chromatic dispersion at which the minimum bit error rate is achieved (figure 5 show the graph of wavelength dispersion compensation value versus bit error rate; paragraph 0066).

Consider **claim 2**, and as applied to **claim 1** above, Nishimoto et al. further disclose, the step of iterating is responsive to the bit error rate in the measuring step and includes selecting a new predetermined amount of chromatic dispersion for the introducing step (read as, the controlling circuit 13 received the bit error rate information and causes the variable dispersion

compensator 10 to change the wavelength dispersion compensation value in a direction corresponding to minimizing the bit error rate) (figure 1 and 5 paragraph 0068).

Consider **claim 3, and as applied to claim 2 above**, Nishimoto et al. further disclose, the step of selecting further includes controlling selection of the predetermined amount of chromatic dispersion in a manner to produce a minimum bit error rate (read as, the controlling circuit 13 received the bit error rate information and causes the variable dispersion compensator 10 to change the wavelength dispersion compensation value in a direction corresponding to minimizing the bit error rate) (figure 1 and 5 paragraph 0068).

Consider **claim 4, and as applied to claim 1 above**, Nishimoto et al. further disclose, the step of compensating at least some portion of the residual chromatic dispersion in the optical transmission system by selecting a compensating amount from a chromatic dispersion range including 0 ps/nm through and including the predetermined amount of chromatic dispersion at which the minimum bit error rate was achieved (read as, the controlling circuit 13 causes the variable dispersion compensator 10 to change the wavelength dispersion compensation value within a preset range (wherein, the range can be set to any value) to determine the optimize values for minimizing the bit error rate; paragraph 0065) (figure 1 and 5, paragraph 0065-0068).

Consider **claim 5, and as applied to claim 4 above**, Nishimoto et al. further disclose, the step of iterating is responsive to the bit error rate in the measuring step and includes selecting a new predetermined amount of chromatic dispersion for the introducing step (read as, the controlling circuit 13 received the bit error rate information and causes the variable dispersion compensator 10 to change the wavelength dispersion compensation value in a direction corresponding to minimizing the bit error rate) (figure 1 and 5 paragraph 0068).

Consider **claim 6**, and as applied to **claim 5** above, Nishimoto et al. further disclose, the step of selecting further includes controlling selection of the predetermined amount of chromatic dispersion in a manner to produce a minimum bit error rate (read as, the controlling circuit 13 received the bit error rate information and causes the variable dispersion compensator 10 to change the wavelength dispersion compensation value in a direction corresponding to minimizing the bit error rate) (figure 1 and 5 paragraph 0068).

Consider **claim 7**, Nishimoto et al. clearly show and disclose, an apparatus for measuring residual chromatic dispersion in an optical transmission system, the apparatus comprising: a dispersion compensator for introducing a predetermined amount of chromatic dispersion at the receive end of the system (read as, the variable dispersion compensator 10 performing wavelength dispersion compensation; figure 1, paragraph 0052); a bit error rate, test element for measuring a bit error rate for the system corresponding to the predetermined amount of chromatic dispersion (read as, the bit error information mentoring circuit 12 measures the bit error rate of the received data; figure 1, paragraph 0054); a control element coupled to said compensator and said test element for adjusting said compensator to a new predetermined amount of chromatic dispersion in order to reduce the bit error rate for the system (read as, a controlling circuit 13 controlling the wavelength dispersion compensation value based on the bit error rate information in-order to reduce the bit error rate; figure 1; paragraphs 0056 and 0068); wherein at least a portion of the residual chromatic dispersion in the optical transmission system is represented by a complement of the predetermined amount of chromatic dispersion at which the reduced bit error rate was achieved (figure 5 show the graph of wavelength dispersion compensation value versus bit error rate; paragraph 0066).

Consider **claim 8, and as applied to claim 7 above**, Nishimoto et al. further disclose, the control element adjusts the compensator to a new predetermined amount of chromatic dispersion in order to minimize the bit error rate for the system, the residual chromatic dispersion in the optical transmission system being represented by a complement of the predetermined amount of chromatic dispersion at which a minimum bit error rate is achieved (read as, the controlling circuit 13 received the bit error rate information and causes the variable dispersion compensator 10 to change the wavelength dispersion compensation value in a direction corresponding to minimizing the bit error rate) (figure 1 and 5 paragraphs 0065-0068).

Consider **claim 9, and as applied to claim 8 above**, Nishimoto et al. further disclose, the control element adjusts the dispersion compensator to a compensating amount of chromatic dispersion selected from a chromatic dispersion range including 0 ps/nm through and including the predetermined amount of chromatic dispersion at which the minimum bit error rate was achieved (read as, the controlling circuit 13 causes the variable dispersion compensator 10 to change the wavelength dispersion compensation value within a preset range (wherein, the range can be set to any value) to determine the optimize values for minimizing the bit error rate; paragraph 0065) (figure 1 and 5, paragraph 0065-0068).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Penninckx et al.; 6,317,240

b) Ooi et al.; 2002/0015207 A1

c) Sakamoto et al.; 2002/0048062 A1

- d) Jones et al.; 2003/0039013 A1
- e) Sugihara et al.; 2004/0114936 A1
- f) Mikami, Satoshi; 2004/0184813 A1
- g) Takahara et al.; 2004/0213578 A1
- h) Ishikawa, George; 2005/0185964 A1

5. Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

6. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Thi Le whose telephone number is (571) 270-1104. The Examiner can normally be reached on Monday-Friday from 7:30am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Kenneth Vanderpuye can be reached on (571) 272-3078. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Thi Le


KENNETH VANDERPUYE
SUPERVISORY PATENT EXAMINER